## ADDITIONAL RECORDS OF NEW JERSEY APHIDS

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Abstract Listed are 147 species of aphids arranged alphabetically by genera and by species under each genus. Detailed records of the localities, dates, food plants and collectors are given for each species and a list of 173 food plants on which the aphids have been collected is included. At present 207 aphids on 241 food plants are known to occur in New Jersey.

"A Preliminary List of the Aphids of New Jersey," Jour. N. Y. Ent. Soc. 64: 99–123, 1956 contained records of 123 species of aphids found on 122 plants plus 7 aphids of uncertain occurrence in New Jersey.

Since then I have collected aphids periodically in and around Ridgewood and Haddonfield. Through the cooperation of other collectors in the state knowledge of the aphids occurring in New Jersey has been increased.

This paper records 147 aphids on 173 food plants, of which 64 aphids and 119 food plants were not recorded in the previous publication. At present 207 aphids on 241 food plants are known from New Jersey.

The principal sources of the records in this paper are as follows: slides in the United States National Museum (USNM) that had been only superficially examined for N. J. records when the Preliminary List was prepared; Dr. Herbert E. Wave (HEW) made about 150 collections during 1959 and 1960 in connection with studies of food plants of the foxglove aphid; Dett W. Jones (DWJ), formerly with the U. S. Dept. of Agric., Moorestown, made collections locally from about 1955 through 1960; Leon W. Coles (LWC) of the same agency and location, has collected locally during the past several years; Ben Puttler, an associate of Mr. Coles, made collections; Dr. Harry W. Allen (HWA), Collaborator, Ent. Res. Div., ARS, USDA, Moorestown, collected locally in 1962; Dr. E. Avery Richmond (EAR), formerly of the Moorestown Lab., collected locally during the past 3 years; William M. Boyd, Chief Entomologist of the N. J. Dept. of Agric. and his staff made collections in various parts of the state in 1962 and staff members of the Plant Pest Control Div., ARS, USDA, Moorestown and Trenton, collected in several parts of the state in 1962 and Doris P. Leonard (DPL) and Donald D. Leonard (DDL), collected locally during the past 3 years.

Determinations, other than those by the author were made by: Miss Louise M. Russell (LMR), Ent. Res. Div., ARS, USDA; Dr. A. T. Olive (ATO), Wake Forest College, Winston-Salem, N. Car.; Dr. Clyde F. Smith (CFS), North Carolina State College, Raleigh; Dr. J. O. Pepper (JOP), Pennsylvania State University, University Park, Pa. and Dr. F. C. Hottes, Grand Junction, Colo.

To all of the above I extend my thanks for their help.

#### LIST OF APHIDS<sup>1</sup>

\* Acrythosiphon solani (Kaltenbach)—formerly in Myzus—Foxglove Aphid. Haddonfield, 29-31 May 1959, one alate on yellow cloth (MDL coll—JOP det). New Brunswick, 4 Apr and 7, 8 Ju on Stellaria media, 6 May on Convolvulus sp., Lychnis alba

<sup>1</sup> Names preceded by an asterisk (\*) are additions to the Preliminary List.

(also 7 Ju), and Cerastium vulgare, 28 Ju on Plantago major and Phytolacca americana, 28 Ju, immatures on Asclepias syriacus. Beemerville, 6 May and 8 Aug on Hieracium sp., 21 Ju on H. floribundum and Stellaria media, 11 Jl on Plantago major. Cichorium intybus and Capsella bursa-pastoris, 8 Aug on C. intybus, 13 Sept on Plantago sp. and Lactuca sp., 13 Sept and 4 Nov on Arctium minus, 8 Dec on Chelidonium majus. Clarksville, 2 Ju "an alate, probably a migrant" on potato. Springfield, 28 Ju on Viola tricolor var. hortensis. Swartswood, 18 Jl on Hieracium sp. Buttsville, 25 Jl on Anctium minus. Branchville, 25 Jl on Hieracium sp. Andover and Oldwick, 8 Aug, Baleville, 15 Aug. Cokesbury, 7 Oct and Mountainville, 7 Oct and 4 Nov—all on Arctium minus. Princeton, 3 Oct on ornamental variety of Oenothera sp. Pinebrook, 8 Oct on A. minusall of the foregoing records (except the alate in Haddonfield) were supplied by Dr. Wave from his 1960 collections. A parasite collected in New Brunswick by HEW 26 Jl 1960 has been identified by B. D. Burks as Aphelinus semiflavus Howard. Somerville, 22 Ju 1962, in the curled leaves of flowering cherry (F. S. Stinson coll—JOP det as "close to solani").

Amphorophora crataegi (Monell). Moorestown, Nov 1939 on Hawthorn (J. L. King coll—1 slide in USNM). Pennington, 25 Jl 1962 on Crataegus crusgalli (F. S. Stinson coll), scarce on leaves. Only one previous record for New Jersey.

Amphorophora rubi (Kaltenbach). Matawan, 6 Jl 1960 on Rubus strigosus (RH Converse coll—1 slide in USNM).

Amphorophora sonchi (Oestlund) Sowthistle Aphid. Haddonfield, 21 Oct 1960, moderately infesting several plants of Sonchus asper (MDL coll). W. R. Richards (Can. Ent. 94 (7): 781, 1962) follows European useage by giving this as a synonym of Nasonovia (Hyperomyzus) lactucae (L).

\*Anoecia setariae Gillette & Palmer. Beemerville, 7 Oct 1960 accidental on Pyrus sp. (HEW coll—JOP det who remarks that he has taken only 3 specimens in Pa., all in light traps).

\* Anuraphis sp. Moorestown, Jl 1955 on Rumex acetosella (DWJ coll-LMR det).

\*Anuraphis amoraciae (Cowen) Western Aster Root Aphid. Haddonfield 31 May 1959 on roots of Artemisia vulgaris and of Aster simplex var. ramosissimus (MDL coll).

\*Anuraphis bakeri (Cowen) Clover Aphid. Moorestown and vicinity, Oct 1955 on red clover (DWJ coll—JOP det). Middlebush, 8 Jl 1960 on *Trifolium* sp. (HEW coll—JOP det). Mt. Holly, summer 1960 on red clover (B Puttler coll). Moorestown, 22 Dec 1961 ( LWC coll) and 18 Apr 1962 (MDL and B Puttler coll) on red clover in USDA greenhouse.

As to the status of this aphis in New Jersey Leon W. Coles of the USDA Laboratory at Moorestown wrote me on Nov 10, 1960 as follows:

"A. bakeri can be readily found in clover fields over a considerable part of N. J. I would not say that it is abundant and would have to be looked for because of its habit of staying under the sheath at the base of the leaf axil until populations become heavy. Occasionally it can be found in considerable numbers in the crowns of the clover plants on new growth. Every time we try to grow red clover in the greenhouse *A. bakeri* presents our worst problem. We can clean up the house by fumigation but before long a new infestation shows up so we figure the aphids must move in from some outside source."

Anuraphis cardui (Linnaeus) Thistle Aphid. Pine Brook, 22 Ju 1960 on Cirsium sp. (HEW coll—JOP, CFS det). Ridgewood, 20 Oct 1962 abundant on several large plants of Cirsium sp. mixed in with Aphis fabae Scop. (MDL & DDL coll). Only one previous record for New Jersey.

Anuraphis maidiradicis (Forbes) Corn Root Aphid. Paterson, 12 Sept 1878 on roots of Verbena sp. (2 slides in USNM-Pergande).

Anuraphis viburnicola (Gillette) Snowball Aphid. Haddonfield, 27 May 1961 on Viburnum opulus, several colonies starting from alates in curled leaves (MDL coll): one alate in Moericke trap Sept 1961 (Glayds Testerman coll—JOP det with query). Ridgewood, 22, 28 1962 on Viburnum sp. a few fall migrants and young (MDL & DPL coll).

\* Aphis sp. New Brunswick, 5 May 1960 on Cichorium intybus (HEW coll-JOP det as "close to rumicis").

\* Aphis sp. Saddle River, 16 Oct 1960, a number of alates and apterae on Anaphalis margaritacea (MDL & DDL coll—JOP det). I know of no previous record of an Aphis on this plant.

\* Aphis sp. Moorestown, 28 May 1962 on Weigela sp., about 20 apterae nearly all of which were immature (HWA coll-JOP det who even queries the genus).

\* Aphis sp. New Brunswick, 7 Ju 1960 on Lychnis alba (HEW coll-JOP det).

Aphis sp. Morristown, 25 Ju 1962 on Andromeda sp. (R. Sayer coll); scarce on tips of leaves and stems, several apterae. I know of no previous record of an Aphis on this plant.

\* Aphis sp. New Lisbon, 28 Ju 1961 a dozen or fifteen apterae and several immatures on Lyonia (Pieris) mariana (P. E. Marucci coll).

\* Aphis asclepiadis Fitch. Moorestown, 25 May 1962 on Asclepias syriaca (HWA coll). Millville, Jl 1962 on A. syriaca (B. K. Buck coll). Haddonfield, 15 Sept 1962 on Apocynum cannabinum, very few on tip of one plant among many (MDL coll).

Aphis coreopsidis Thomas. Millville, 27 Jl 1962 on Nyssa sylvatica (B. K. Buck coll). Ridgewood, Ju 1961, one alate in Moericke trap (DDL coll—JOP det). Wycoff, 17 Sept 1961 on Coreopsis crassifolia Ait., E. C. Leonard det. (MDL & DDL coll).

\* Aphis craccivora Koch. Mt. Holly and vicinity, Oct 1955 common on red clover (DWJ coll—LMR det) Moorestown, Feb 1962 on alfalfa in USDA greenhouse (B. Puttler coll—LMR det). Masonville, 2 Aug 1962 on *Robinia pseudaccacia* (HWA coll).

Aphis crataegifoliae Fitch. Moorestown, 15 May 1962 on Crataegus sp. (EAR coll). Wrightstown, 19 Jl 1962 on Crataegus sp. (J. J. Earley coll).

\* Aphis debilicornis Gillette & Palmer. Fort Lee, 2 Jl 1909 on Helianthus sp., apterous viviparae (Gillette in J. Econ. Ent. 3(5): 404, 1909).

Aphis fabae Scopoli Bean Aphid. Ridgewood, 18 Oct 1938, starting colonies on Hydrangea sp. 3 alates and 3 oviparae (MDL coll). This record was in the Preliminary List but oviparae were not mentioned and the plant was omitted from the plant list. "Was much more numerous than usual and caused damage to southern bean plantings."

(Summary of Insect Conditions—1958 in New Jersey in CEIR 9(7): 89-90, 1959). New Brunswick, 10 May 1960 on ornamental Euonymus atropurpureus (HEW coll—

JOP det). Pinebrook 8 Ju on Chenopodium album and 22 Ju 1960 on Arctium minor (HEW coll—JOP det). Haddonfield, 4 Jl 1960 scarce on nasturtiums (MDL coll). Wycoff, 14 Oct 1961 on Chenopodium album (MDL & DDL. Moorestown, 3 Jl 1961 on C. album (LWC coll) and 25 May on C. album and 26 May 1962 on rhubarb (HWA coll); 25 May 1962 on Viburnum trilobum (HWA coll—JOP det). New Lisbon, 24 Sept 1962, the mostly dried up remains of what had been a heavy infestation on the flower-stems of a number of roadside Gerardia pedicularia (MDL & EAR coll). Ridgewood, 20 Oct 1962 heavy on a large Cirsium sp. and a small colony on Rumex obtusifolia (MDL & DDL coll). Medford, 6 Oct 1962, a heavy infestation on Cirsium sp. (Mary Rohwer coll). Medford Lakes, 7 Oct 1962, a few on Lactuca sp. (G. G. Rohwer coll).

Aphis forbesi Weed. Strawberry Root Aphid. Riverton, May 1962 on strawberry

(D. Fink coll—1 slide in USNM). Seabrook, 7 Jul 1956 on strawberry (J. R. McGrew coll—1 slide in USNM).

Aphis gossypii Glover Cotton or Melon Aphid. Merchantville, 18 Jl 1891 on melon (1 Pergande slide in USNM). North Bergen, Ju 1931 on Catalpa sp. (J.G. Rau coll-1 slide in USNM). Moorestown, Oct 1955 on Sedum sp. (DWJ coll-2 slides in USNM det LMR as gossypii but filed under sedi): 24 Jl and Aug 1960 on Catalpa speciosa (DWJ coll): 22 Dec 1961 on Celastrus scandens and 10 Aug 1961 on cotton in USDA greenhouses (MDL coll); 23 May 1962 on rose-of-sharon (MDL & EAR coll); 22 Dec 1961 on alfalfa and cotton in USDA greenhouses (LWC coll). Haddonfield, 2 Sept 1946 on honewort, Cryptotaenia canadensis (MDL coll). 28 May 1959 quite a few on underside of flowers of Petunia sp. (MDL coll), 28 May 1959 and 1961 scarce on roseof-sharon (MDL coll); 29 May 1961, one alate in Moericke trap (DPL coll-JOP det). Ridgewood, Ju 1961 three alates in Moericke trap (DDL coll-JOP det): at duck pond 21 Oct 1962, a few apterae and alates on Catalpa sp. (MDL & DDL coll). Sooy Place 8 Aug 1960 on Monarda punctata (DWJ & LWC coll). Columbus, 5 Aug on muskmelon and 11 Aug 1959 on okra (LWC coll). New Brunswick, 12 Ju on Stellaria media and 26 Jl 1960 on Hibiscus trionum (HEW coll). Saddle River, 16 Oct 1960 on Eupatorium purpureum (MDL & DDL coll). Linwood, 26 Ju 1960 on Hibiscus sp. (HEW coll). Sandtown, Burlington Co. (in the Pine Barrens), 28 May 1962, 8 alates and 3 immatures on Vaccinium corymbosum (MDL & HWA coll-JOP det as "close to gossypii"). New Brunswick, 12 Jl 1960 on Stellaria media (HEW coll-MDL det with query). Linwood, 1 Aug scarce on leaves on Weigela sp. (W. A. Junghans coll-JOP det with query).

Aphis helianthi Monell. Pinebrook, 22 Ju 1960 on Cirsium sp. one alate "drift" (HEW coll—JOP det). Ridgewood, Ju 1961, two alates in a Moericke trap (MDL coll—JOP det as "close to helianthi").

Aphis illinoisensis Shimer. Grapevine Aphid. Montclair, 2 Ju 1897 on grapes (2 slides in USNM). Fort Lee, 2 Jl 1909 "Very abundant on leaves, tendrils and new growth of wild grape." (Gillette as Aphis ripariae Oestlund in J. Econ. Ent. 3(5): 404, 1910). Shiloh, 22 Ju 1962 on grape (B. K. Buck coll). Medford Lakes, 27 Jl 1962 on grapes (G. G. Rohwer coll).

Aphis impatientis Thomas. Medford (Lake Cotoxen), 21 Sept 1962 on Impatiens pallida, fairly common and attended by the ant, Formica pallidifulvum subsp. nitidiventris M. R. Smith det (MDL and EAR coll). The Aphis cephalanthi of the Preliminary List is this species.

\* Aphis oestlundi Gillette. Moorestown, 27 May 1962 on Oenothera probably biennis (HWA coll).

Aphis pomi DeGeer Apple Aphid. "Was more numerous and difficult to control than usual." (Summary of Insect Conditions in 1958 in New Jersey in CEIR 9(7): 89-90, 1959).

Moorestown, 17 Jl 1959 on Sorbus sp. (M. W. Maines coll); 25 May 1962, alates and apterae of all sizes on Chaenomeles japonica (HWA coll): 5 Aug 1962, many apterae on Sorbus aucuparia (EAR coll). Haddonfield, 29 May 1961, three alates in a Moericke trap (DPL coll—JOP det with query). Shiloh, 22 Ju 1962 on Cotoneaster salsifolia and hybrid Cydonia (B. K. Buck coll). Cohansey, Cumberland County 17 Aug 1962, apterae and "pupae" abundant on stems of a weeping crab (W. Junghans coll). New Brunswick, 10 Ju 1960 on Crataegus sp. (HEW coll—JOP det with query). Dayton 28 Ju 1962 on Contoneaster sp., scarce on leaves and flowers (F. S. Stinson coll). Skillman, 19 Ju 1962, abundant on leaves and stems of flowering crab (Malus sp.) (F. S. Stinson coll).

Aphis pseudohederae Theobald Ivy Aphid. It is probable that this aphid is generally

distributed throughout the State on English Ivy but it is rarely sufficiently abundant to attract attention, usually occurring only in small numbers on the tender tips and within small curled leaves. Available records, all on English Ivy, *Hedera helix*, are as follows:

Haddonfield, 3 Jl 1960, a few (D. L. Winters coll); 26 Oct 1961 small colonies on a few terminals of a number of vines attached to the side of a house with one or two alates in each and moderately parasitized by *Lysephlebius testaceipes* (Cresson)—det Muesebeck, and attended by the ant, *Prenolepis imparis* (Say)—det M. R. Smith (MDL coll); 23 Dec 1961, very scarce on same vines (MDL): 21 Dec 1962, a very few on these vines, dead but most bodies still plump even though following 10-20°F., one alate and some parasitized (MDL). Moorestown, 18 Apr 1962 indoors (Ben Puttler coll).

Aphis rùbifolii (Thomas). Sandtown, Burlington Co., (in the Pine Barrens), 28 May 1962, a number in a tightly curled leaf of a small sand blackberry *Rubus cunei*folium, (MDL & HWA coll).

Aphis rumicis Linnaeus Dock Aphid. Often observed to be abundant on a considerable sized patch of *Rumex obtusifolius* from 1935 to 1945 (MDL). Moorestown, 1 Jl on *Rumex* sp. (LWC coll). New Brunswick 16 May 1960 on *Rumex crispus* (HEW coll --JOP det).

Aphis sambucifoliae Fitch. Newton, 8 Aug 1960 on Sambucus canadensis (NEW coll). Haddonfield, Sept 1961, one alate in a Moericke trap (Gladys Testerman coll-JOP det).

\* Aphis sedi (Kaltenbach). Moorestown, Oct 1955 on Sedum sp. (DWJ coll-LMR det as gossypii Glov. but the 2 slides in the USNM are filed under sedi).

Aphis spiraecola Patch Spiraea Aphid. Haddonfield, 29 May 1959 on Pyracantha sp. (MDL coll); late April 1959, one alate on yellow cloth (Gladys Testerman coll—JOP det); Aug and Sept 1961, one alate each in Moericke trap (Gladys Testerman coll— JOP det): 28 May 1961 scarce on Spiraea vanhouttei (MDL coll); 8 Aug 1961 on Pyracantha crenulata (D. L. Winters coll). Pinebrook, 22 Ju 1960 on Galinsoga parviflora (HEW coll—JOP det). Saddle River, 16 Oct 1961 a number on Eupatorium perfoliatum (MDL & DDL coll—JOP det). Marlton, 28 May 1962 on Amelanchier sp. (MDL & HEW coll) attended by the ant Tapinoma sessile (Say) det M. R. Smith. Shiloh 22 Ju 1962 on Pyracantha coccinea var. lalandi (B. K. Buck coll). Middleville, J1 1962 on Amelanchier canadensis (B. K. Buck coll). Moorestown, J1 1960 on Celastrus scandens in USDA greenhouses (LWC coll); 15 May 1962 on Spiraea vanhouttei (EAR coll); 25 May 1962 on Pyracantha sp. (HWA coll) attended by the ant, Tapinoma sessile (Say) M. R. Smith det., 23 May 1962 on Crataegus sp. (MDL & EAR coll—JOP det).

Brevicoryne brassicae (Linneaus) Cabbage Aphid. High Bridge. 1 Jl 1908 on lambsquarters (1 Pergande slide in USNM).

Herrick and Hungate in "The Cabbage Aphis" (Cornell Univ. Agr. Exp. Sta. Bull, 300: 720, 1911) state in regard to the cabbage aphid in New Jersey; "Dr. J. B. Smith says that in 1890—'The plants are sometimes so crowded with lice that it was impossible to see the leaves and the plants were so devitalized that they failed to grow. Early cabbages suffered severely and some growers of young plants for the market abandoned their crop and plowed it under. Damage was especially severe on young plants just set out and many had to be replanted.'"

"The cabbage aphid was more numerous and damaging than usual on cabbage, broccoli and cauliflower." (Summary of Insect Conditions in 1957 in New Jersey, CEIR 8(1): 7, 3 Jan 1958).

"A few isolated infestations of the cabbage aphid occurred in late season cole crops." (Summary of Insect Conditions in New Jersey in (1961, CEIR 12 (11): 215, Mar 16, 1962).

"Calaphis n. sp. Granovsky. Caldwell, Jl 1931, no plant, no coll given (5 PARATYPE slides in USNM).

Calaphis betulaecolens (Fitch) Caldwell, Jl 1931, no plant, no coll given (1 slide in USNM—Granovsky det). Moorestown, 23 May 1962 on Betula papyrifera (MDL & EAR coll—JOP det). Cherry Hill, 1 Aug 1961 and 29 May 1962 on Betula populifolia (D. L. Winters coll—JOP det). Ridgewood, 27 Jl 1961 on Betula pendula (MDL coll—JOP det "as near as I can tell").

Calaphis betulella Walsh. Ridgewood (Valleau Cemetery) 21 Oct 1962 (MDL & DDL coll) and 27 Oct at the Duck Pond (MDL & Geo. Saile coll), oviparous females and males numerous on *Betula populifolia*. New Brunswick, 27 Ju 1960 one alate in flight (HEW coll—JOP det). Clifton, 28 Jl 1961, a number of head-high plants of *Rhus glabra* with many of the leaflets (underside) and stems of the compound leaves encrusted with the dried bodies of this aphid. I cannot explain this unusual infestation, especially since no birches were observed in the vicinity. Only one record, previous to these, for N. J.

Calaphis castaneae (Fitch). Fort Lee, 2 Jl 1909 on chestnut, both alate and apterous viviparae. (Gillette in J. Econ. Ent. 3(4): 368, 1910).

Capitophorus braggii Gillette—see C. elaeagni (delG.)

\* Capitophorus elaeagni (del Guercio) (In American literature as C. braggii (Gillette). Mt. Holly, 24 Oct 1955 on Cynara scolymus (DWJ coll—LMR det). Haddonfield, Sept 1961, one alate in Moericke trap (Gladys Testerman coll—JOP det). New Brunswick, 10 May 1960 on ornamental Elaeagnus umbellata (HEW coll—CFS); 15 Jl 1960, 6 apterae on Cirsium sp. (HEW coll—MDL det). Ridgewood, 20 Oct 1961 on Ciresium sp. (MDL & DDL coll—JOP det). Riverton, 22 Nov 1961 on Elaeagnus umbellata, oviparae present (EAR coll—JOP det).

\* Capitophorus glandulosus (Kaltenbach) Haddonfield, 1-4 Jl 1960, abundant on the lower leaves of a small clump several feet square of mugwort, Artemisia vulgaris, at the edge of the leaves turning them yellow. One parasite was obtained which Dr. Muesebeck determined as Praon sp., probably new. On my next visit in late Nov 1960 the aphids were abundant and many males (small, elongate and reddish and very active) and oviparae were present. A few of the small, shining black eggs were found on the leaves on which they apparently overwinter on the ground at the base of the plants. On Oct 1961 these same plants were only moderately infested; a few males were observed. On May 24-26, 1962 the aphids were abundant but in late Oct none could be found since the plants were very small having been cut back to the ground somewhat earlier. Alates have always been scarce on the plants but if infested leaves were put in a small box for two or three days alates readily developed. These aphids are very active when disturbed.

I have found this aphid at two localities in the District of Columbia. Dr. Pepper wrote me that he had made a good collection of what he believes is this species at Lancaster, Pa. on mugwort in early June 1962. These were in a nursery which had brought several loads of evergreens from New Jersey and it is believed that the mugwort was introduced with this shipment. The closely related *C. pseudoglandulosus* Palmer is recorded from several localities in Colorado and also as being common and generally distributed in northern Utah and southern Idaho on three species of *Artemisia* but not on *vulgaris*.

Capitophorus hippophaes (Walker) Haddon Heights, 23 Jl 1930 on Polygonum pennsylvanicum (L. J. Bottimer coll—1 slide in USNM). Moorestown, 22 Jl 1956 on Polygonum sp. both outdoors and in USDA greenhouse (DWJ coll—LMR det); 24 Jl and 30 Aug 1960 on Polygonum sp. (DWJ coll); 28 Ju 1961 on Polygonum sp. (R. V. Smith

coll—JOP det). Ridgewood, 28 Jl 1961, one aptera on *Polygonum persicaria* (MDL coll). New Brunswick and Sussex, 28 Ju and 6 Jl (HEW coll—JOP det). Riverton, 22 Nov 1961 on *Elaeagnus umbellata* (EAR coll—JOP det).

\* Cavariella essigi Gillette & Bragg Ridgewood, 28 Oct 1962 abundant on upper part of stems and at base of inflorescence of several plants of wild carrot, Daucus carota (MDL & DDL coll). First definite record for N. J.

\* Cepegillettea myricae (Patch) High Point, 18 Jl 1960 on Comptonia (Myrica) peregrina var. asplenifolia (HEW coll, 6 apterae).

Chaitophorus populicola (Thomas) Cloudy-winged Poplar Leaf Aphid (In Preliminary List as Neothomasia). Fort Lee, 2 Jl 1909, as Thomasia, on Poppulus tremuloides (Gillette J. Econ. Ent. 2(6): 388, 1909). Haddonfield, 7 Sept 1948 on Populus sp. (MDL coll).

Chatiophorus viminalis Monell Black and Green Willow Leaf Aphid. Ridgewood, 21 Jl 1961, fairly common on underside of many leaves of two small willows at the Duck Pond (MDL & Geo. Saile coll) and 21 Oct 1962, a few males and oviparous females on same trees (MDL & DDL coll).

\*? Cinara longispinosa Tissot. Moorestown, 13 Nov 1961, oviparous females on Pinus taeda (EAR coll—Hottes det with query).

\* Cinara palmerae (Gillette) New Brunswick, 24 May 1960 on Picea sp. (HEW coll-JOP det).

\*? Cinara pergandei (Wilson) Haddonfield, one alate in flight between 30 Ju and 5 Jl 1958 (MDL coll-Hottes det with query).

\* Cinara pilicornis (Hartig) Springfield, 2 Ju 1960 on Picea sp. and Cranbury 20 Ju 1960 on Picea glauca (HEW coll-JOP det).

\* Cinara pinea (Mordwilko) Moorestown, 15 May 1962, alates and apterae on Pinus sylvestris and 23 May 1962, alatoid nymphs on the "candle shoots" of P. taeda (EAR coll—JOP det).

Cinara strobi (Fitch) White Pine Aphid. Moorestown, 28 Sept, 2 Oct and 1 Nov 1962 on Pinus strobus (EAR coll) attended by the ant Camponotus pennsylvanicus (De-Geer)—M. R. Smith det.

Colopha ulmicola (Fitch) Cockscomb Gall Aphid of Elm. Haddonfield, Sept 1961, 2 alates in Moericke trap (Gladys Testerman coll—JOP det).

\* Dactynotus sp. New Brunswick, 26 Sept 1960 on Lactuca serriola 2 apterae (HEW coll-ATO det).

\* Dactynotus sp. 10 Sept 1960 on Rudbeckia hirta (DDL coll—ATO det). In regard to these specimens Dr. Olive wrote on 24 April, 1960 "Need color notes—very, very interesting. Please send me some alcohol specimens if they are available. May be a new species."

\* Dactynotus sp. Ridgewood, 6 Aug 1960, 1 aptera, 1 alate on Rudbeckia hirta (DDL coll—ATO det who comments as for the above).

\* Dactynotus sp. Bridgeton, 31 Jl 1962, 18 aptera, several immatures on Malva sylvestris (B. K. Buck coll—ATO det who comments "need color notes").

\* Dactynotus sp. Glassboro, 2 Jl 1962, 1 aptera, several immatures on smartweed (L. H. Sohl coll—ATO det who comments "need color notes").

\* Dactynotus sp. Marlton, 17 Jl 1962, 2 collections totaling 7 alates, 15 aptera, immatures on Gloriosa Daisy (Marie C. Quinden coll—ATO det who comments "need color notes").

\* Dactynotus sp. Ridgewood, Jl 1962, 2 collections—one had 3 alates, 12 apterae immatures; the other had 14 alates, 12 apterae, immatures—both on a few cult. Rudbeckia hirta in the garden (DDL coll—ATO Det who comments "need color notes").

Dactynotus ambrosiae (Thomas) Brown Ambrosia Aphid. Ridgewood, Jl 1960, 4 alates, 4 apterae on Rudbeckia hirta (DDL coll—ATO det). Haddonfield, Sept 1961 and late Apr 1959, 1 alate each in Moericke trap (Gladys Testerman coll—JOP det). Riverton, 28 Jl 1962 on ragweed J. J. Earley coll—ATO det). Masonville, 2 Aug 1962 on Solidago sp. (HWA coll—ATO det).

\* Dactynotus anomala (Hottes & Frison) n. comb. Haddonfield, 4 Jl abundant on a small clump of hardy purple asters in a garden and with heavy parasitism which almost wiped out the infestation a little later on; 30 May 1959 fairly common on same plants; 28 May 1961, a few apterae and nymphs on same plants and they remained scarce the rest of the season; 25 May 1962, the terminals of a few of these plants considerably infested (all of foregoing MDL coll and det except the last is ATO det); none present Oct 1962.

?\* Dactynotus chrysanthemi (Oestlund). Haddonfield, Sept 1961 1 alate in Moerice trap (Gladys Testerman coll—JOP det with query).

\* Dactynotus gravicornis (Patch). Swartswood, 18 Jl 1960, 1 alate, 2 apterae on Erigeron sp., Buttsville, 25 Jl 1960, 4 alates, 1 aptera on E. strigosa and High Point, 19 Jl 1960, 1 aptera, 8 alatoid nymphs on Solidago sp. (all HEW coll—ATO det).

\* Dactynotus nigrotuberculatus Olive. Moorestown, 26 Ju 1962, and 1 Aug 1962 (HWA coll—ATO det), alates and apterae on Solidago sp. Masonville, 2 Aug 1962, alates and apterae on Solidago sp. (HWA coll—ATO det). Woodstown, 16 Ju 1960 on Solidago sp. (HEW coll—ATO det).

\* Dactynotus paucosensoriatus Hille Ris Lambers. Riverton, 29 Jl 1962. 1 alate, 1 immatures on wild Aster sp. (J J Earley coll—ATO det).

\* Dactynotus pseudambrosiae Olive. Moorestown, 1 Aug 1962, alates and apterae on Lactuca virosa (HWA coll—ATO det). Little Silver, 13 Jl 1962, alates and apterae on Lactuca sp. (F. H. Pagliaro coll—ATO Det). Milleville, 27 Jl 1962, alates and immatures on Lactuca serriola (B K Buck coll—ATO det). Andover, 8 Aug 1960, 4 alates, 6 apterae on Sonchus oleraceus (HEW coll—ATO det).

Dactynotus rudbeckiae (Fitch) Goldenglow Aphid. This species was given in the flood plant list of the Preliminary List under Solidago fistulosa but the plant was omitted from the list of aphids. This record was from Haddonfield in the mid 30's.

Dactynotus sonchellus (Monell) (Under Macrosiphum in the Preliminary List). Moorestown, 27 May 1962, 1 alate, 4 apterae on Lactuca virosa (HWA coll—ATO det). Medford Lakes, 27 May 1962, 8 apterae on Lactuca virosa (G G Rohwer coll—ATO det).

\* Dactynotus tissoti (Boudreaux) New Brunswick, 15 Jl 1960, 3 apterae on Solidago sp. (HEW coll—ATO det). Cherry Hill, 29 May 1962, 1 alate, 1 aptera on Erigeron sp. (MDL & DL Winters coll—ATO det). Moorestown, 4 Jl 1962, 1 alate on Solidago sp. (HEW coll—ATO det with query).

\* Dactynotuse tuataiae Olive Medford Lakes, 1 Aug 1962, several apterae, 1 alate and 2 Aug 1962, 1 aptera on Ambrosia artemisiifolia (HWA coll—ATO det).

Drepanaphis acerifolii Thomas Painted Maple Aphid. "The painted maple aphid was fairly severe on nursery and street maples in late August and September." (Summary of Insect Conditions in 1959 in New Jersey in CEIR 8(1): 8, Jan 3, 1958).

New Brunswick, 10 Aug 1959 and 20 Ju 1960 on Acer saccharinum (HEW coll—CFS det). Pemberton, 8 Sept 1961 on A. saccharinum (LWC coll). Ridgewood at the Duck Pond, 21 Oct 1962, a few alates on A. rubrum (MDL & DDL coll).

\* Drepanaphis keshenae Granovsky. Haddonfield, 4 Jl 1958, 1 alate on a yellow chair (MDL & DDL coll).

\* Drespanaphis parvus Smith Trenton, 18 Sept 1962 on silver maple (W M Boyd coll—JOP det).

Drepanosiphum platanoides (Schrank) Sycamore Aphid. Highland Park, 18 Oct 1960 on Acer platanoides, a number of specimens (from HEW—Harshberger coll). Second record for N. J.

Eriosoma americanum (Riley) Woolly Elm Aphid. Moorestown, 29 May 1960, a single "drift" alate on *Ilex verticillata* (DWJ coll—LMR det). Ridgewood Jl 1961, 2 alates in a Moericke trap (DDL coll—JOP det).

Eriosoma crataegi (Oestlund). Lake Hopatcong (Willis Gertsch coll recorded by G F Knowlton in Utah Agr. Exp. Sta. Mimeo. Series 389:22, 1952. Essex Fells, 27 Sept 1930 on Crataegus sp. (W S Fields coll—USDA's Special Port Survey). Bridgeton, 30 Aug 1962, abundant on stems of Pyracantha sp. (W Junghans coll). Little Silver, 13 Jl 1962, abundant on stems of Crataegus crusgalli (G Pope coll).

Eriosoma lanigerum (Hausmann) Woolly Apple Aphid. Washington Jl 1922 on elm (Mrs. T S Diedrich coll—1 slide in USNM). Browns Mills, 13 Mar 1916 on apple roots (Scammell coll—2 slides in USNM).

Euceraphis punctipennis (Zetterstedt). betulae (Koch). Wycoff, 14 Oct 1960, a few ovipararae on European white birch (MDL & DDL coll—JOP det). Ridgewood (Bird Sanctuary), 20 Oct 1961 on Betula populifolia, oviparae predominant (MDL & DDL coll—JOP det); (Huber's home), 26 Oct 1962, all sexuals on gray birch (MDL & DDL coll—JOP det); (Duck Pond), 27 Oct 1962, oviparae on gray birch (MDL & Geo. Saile coll—JOP det).

\* Euceraphis deducta Baker Moorestown, 23 May 1962, one alate on Betula papyrifera (MDL & EAR coll—JOP det with query).

?\* Euceraphis gillettei Davidson Ridgewood, 22 Jl 1961, two alates on Betula pendula (MDL coll—JOP det "as near as I can tell"). Eastop (May 1963) believes this is a synonym of punctipennis.

**?** Geoica lucifuga (Zehntner) Haddonfield, 31 May 1959 on roots of Taraxacum officinale and Artemisia vulgaris on Jl 2 1960 (MDL coll—Maxson det with query). Hille Ris Lambers states (June 1963) that this species lives exclusively on grasses and is not known to occur in N. Am. Records of it in N. Am. must all relate to Sminthurodes betale Westwood.

Gobaisha ulmifusus (Walsh & Riley). 2 Jl 1909—"The galls of this species [in *Pemphigus*] were shown to me by Dr. Beutenmuller of Palisades, N. J. The leaves of a small elm were much infested, the larger galls being fully two inches in length. Just an occasional gall was beginning to turn yellow and in these small alate examples were found. In all the galls some stem mothers were still present; they were very pale yellow in color and large and sublobular. All of the descendants of the stem mothers were acquiring wings." (Gillette *in* Jour. Econ. Ent. 3(5):885, 1910).

Hammanelistes spinosus (Shimer). Morris Plains, 20 Nov 1943, reported by N. J. Agr. Exp. Sta. as "very abundant on birch, causing considerable leaf distortion." Many specimens from birch received from Wm. Collins of N. J. Agr. Exp. Sta. from Belleville, 6 Ju 1958. Cherry Hill, 2 May 1962, many in a number of folded leaves of *Betula populifolia*, D. L. Winters coll). Sandtown, Burlington Co. (in the Pine Barrens) 28 May 1962, common in the distorted leaves of many gray birches, *Betula populifolia* (MDL & HWA coll).

Hormaphis hamamelidis (Fitch). Milford, 14 Aug 1952 on witch-hazel (R Roseman coll-3 slides in USNM).

Hyadaphis pseudobrassicae (Davis) Turnip Aphid. (Formerly in Rhopalosiphum). Sandtown, Burlington Co. (in the Pine Barrens), 28 May 1962, a few in the seed-heads of a Lepidium virginicum (MDL & HWA coll).

Hyalopteroides humilis (Walker) Orchardgrass Aphid. (as H. dactylidis Hayhurst

in Prelim. List). "New Jersey—causing considerable injury to orchardgrass. First time observed aphid in injurious numbers." (O Starnes—Summary of Insect Conditions in 1952; from a note in USDA's Insect Detection and Survey records).

Hyalopterus pruni (Geoffroy) Mealy Plum Aphid. Woodstown, 21 Jl 1960, a number of alate "drifts" taken on tomatoes (HEW coll—JOP det). Lindenwold, 19 Ju 1962 on Miner Plum, Prunus hortulana var. mineri (N. J. Dept. Agr. coll).

Lachnus salignus (Gmelin) Giant Willow Aphid. In Sept 1960 Dr. Bailey B. Pepper, Head, Department of Entomology, N. J. Agr. Exp. Sta. wrote me as follows:

"In my travels over the State I have seen the giant willow aphid on many occasions in the Bridgeton-Salem area. In fact many of the farm families have willow trees, usually on the back lawns, and this aphid often becomes a nuisance when the housewife hangs her laundry on the line. I have had a great many calls thru the County Agents' offices thru my travels to parts of the State. In fact when you and I were scouring around Seabrook Farms (at Bridgeton) in connection with pea aphid control by aircraft, a beautiful weeping willow tree right near the Seabrook office was heavily infested and the aphids invaded the quarters of some of the workmen via the laundry and the clothing of the occupants. I believe this was in 1937."

Middlesex Co., 7 Oct 1960, a single weeping willow infested (J L Libby coll). Saddle River, 16 Oct 1960, a single alate in flight (MDL & DDL coll—JOP det). Moorestown, 10 Jl 1960, very abundant on the trunk of *Salix discolor* (DWJ coll): Jl 1960 and 11 Aug 1962, abundant on the trunk of *Salix discolor* (EAR coll). Roadstown, 11 Jl 1962 on *Salix* sp. (B K Buck coll).

Longistigma caryae (Harris), Giant Bark Aphid. Orange, Aug 1932 on Platanus orientalis (Bartlett Tree Research Labs). South River Middlesex Co., 10 Oct 1960, heavily infesting pin oak trees (J L Libby coll). Haddonfield, late April 1959, 2 alates on a yellow cloth (Gladys Testerman coll).

Macrosiphoniella sanborni (Gillette) Chrysanthemum Aphid. Although generally distributed and locally and seasonally scarce to abundant on cultivated varieties of chrysanthemums only a few collections have been made in the past three years as follows: New Brunswick, 1 Jl and Highland Park, 5 Ju 1960 (HEW coll). Haddonfield, 28 May 1961, scarce (MDL). Moorestown, 25 May 1962 (HWA) coll. Medford Lakes, 24 May (G G Rohwer coll); Linwood, Jl (I H Sohl coll); Medford, 17 Jl and 21 Oct (Marie C Quinden coll)—all 1962 and recorded as scarce.

\* Macrosiphum sp. New Brunswick, 15 Jl 1960, 1 mature aptera on Cirsium sp. (HEW coll—ATO det).

\* Macrosiphum sp. New Brunswick, 5 apterae, 28 Ju and 6 apterae 12 Jl 1960 on Polygonum convolvulus (HEW coll—ATO det and one immature 28 Ju 1960 (HEW coll—JOP det).

Macrosiphum avenae (Fabricius), English Grain Aphid. (Formerly M. granarium (Kirby) Trenton, 3 May 1892 on wheat (1 slide by Pergande in USNM). New Brunswick, 10 May and 9 Ju 1960 on rye (HEW coll).

Macrosiphum euphorbiae (Thomas) Potato Aphid. Riverton, 27 Ju 1928 on cult rose (Kisliuk & Chapman coll—1 slide in USNM). Haddonfield late Apr 1959, (Gladys Testerman coll) and 29-31 May 1959, 2 alates on yellow cloth (MDL coll—JOP det); 28 May 1959 on terminals of *Campsis radicans* and fairly common on the flowers of *Petunia* sp. and 27 May 1961 (MDL coll); Cherry Hill Inn, 15 Oct 1960 on *Petunia* sp. (L L Pechman coll). Gibbstown, 9 Aug 1959 on eggplant (DWJ coll). Clarksville, 2 Ju on potato, New Market 20 Ju on radish, Highland Park, 5 Ju on chrysanthemum, New Brunswick, 15 Oct on squash, 16 May and 8 Ju on *Chenopodium album* and 5 Ju on *Cichorium intybus*—all HEW coll 1960—det ATO). Moorestown 25 May 1962 on

Apocynum cannabinum, on Chenopodium album, on Asclepias syriaca and common on seed-stalks of cult Aquilegia sp. (HEW coll). Cherry Hill, 26 May 1962 on Apocynum cannabinum (MDL & DL Winters coll). Medford Lakes, 1 May 1962, heavy on cult rose (G G Rohwer coll). Ridgewood, 25 Oct 1962, a single alate on cult rose (MDL & DPL coll—JOP det).

In a recent report by the N. J. Coop. Econ. Ins. Survey it is stated that the potato aphid is injurious to white potatoes, eggplant and redpeppers and occasionally to sweet potatoes.

The following surveys to determine the number of overwintering eggs of the potato aphid are, as far as I know, unique except for those made in Maine by Shands and Simpson after which these are patterned:

"The potato aphid is a particular pest of potato and tomato crops in the State. Through survey, prediction of outbreaks is a possibility and many fields could be saved from much damage. A swamp rose (*Rosa palustris*) is the primary overwintering host for eggs. Most eggs again were found along Raccoon Creek in Gloucester County. Counts in the Cumberland-Salem area were about the same as previous years. Many more eggs were found in the central area than before. Eighteen locations in 7 counties were surveyed. The average per location per 100 buds or crotches were 8.78. In 1958, the average was 1.42 and in 1957, 2.86. Overwintering eggs were more numerous this spring than in 1958 or 1957, and the infestation potential for potato aphids is higher this year than in either previous year." (Coop. Surv., N. J. Dept. Agr. Rutgers Univ. CEIR 9(1): 259, Apr 10, 1959)."

"A survey to determine the number of overwintering eggs of the potato aphid that are present on swamp rose, *Rosa palustris*, was conducted in the State during February and March. Overwintering eggs were found less numerous, generally, this spring then they were in 1957, 1958 or 1959. The most eggs were found along Raccoon Creek in Gloucester County. Eggs were less numerous in the Cumberland-Salem County area than in previous years, and very few eggs were found in the central area of the State. Based on the survey, the infestation potential for potato aphids is lower than in any previous year. However, weather conditions in early spring may affect the development of populations." (Ins. Dis. Newsl. CEIR 1(15): 249, April 8, 1960)."

Actually the egg surveys were made during February and March during the 5-year period of 1957–1961 in Burlington, Cumberland, Gloucester, Mercer, Middlesex, Monmouth and Salem Counties. The number of eggs, fully extended and shrivelled, were counted in order to arrive at the total number of eggs found and the percentage thereof that were dead. The total number of eggs found varied as follows: 1957–427, 1958–234, 1959– 1522, 1960–149, 1961–714. During the 5 year period the percentage of egg mortality varied from 24.3 to 76.8 on the terminals and from 22.5 to 60.2 on the crotches.

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\* Macrosiphum pseudorosae (Patch) Ridgewood, 1 Jul 1960, 1 alate "drift" on Rudbeckia hirta (DDL coll—ATO det).

Macrosiphum rosae (Linneaus) Rose Aphid. Moorestown, 29 May 1960, a small colony of mostly alates on *Ilex verticillata* (DWJ coll—LMR det) and 13 Nov 1961, many on cult roses (EAR coll). Ridgewood, early Jl 1960, 4 alates, 2 apterae on *Rudbeckia hirta*, presumably accidental (DDL coll—ATO det); 28 Oct 1962, a few (MDL & DPL coll) and Ju and Jl 1962 on several rose bushes (DDL coll). Haddonfield, 15 Oct 1960, a large *Rosa multiflora* hedge heavily infested (MDL coll). Summit, 15 Oct 1960, moderate on cult rose (MDL & R R Leonard coll). Princeton, 25 May 1962 on cult rose (J J Bagocius coll).

Masonaphis (Ericobium) azaleae (Mason). This is in the Prelim. List as Amphorophora vaccinii Mason. In Dec 1962 Philip E. Marucci of the Cranberry and Blueberry Research Laboratory, N. J. Agr. Exp., Sta. at Pemberton wrote me as to the present status of this aphid:

"It is common on blueberries during the soft succulent period of growth but it declines very rapidly after the plant hardens. Growers' chemical control programs against other insects are very rough on it. Even in the wild, however, it declines quite rapidly after the middle of June. In regard to its potential ability to transmit mosaic virus I have not secured sufficient evidence to prove it to be a vector."

This species was described by P. W. Mason (Proc. U.S.N.M. 67 Art. 20, pp. 67-70, 1925) as *Amphorophora vaccinii* from 2 alates, 9 apterae and 2 oviparae, all collected by H. B. Scammell at Whitesbog. The alates and apterae were from blueberry, 28 Ju and 11 Jl, 1916 and the oviparae were taken 1 Dec 1914 on three-square, *Scirpus americanus*, while cranberry bog was being flooded. The synonymy here used is by Dr. M. E. MacGillivary in Temminckia 10:49-55, 1958.

Specimens were collected by B. Puttler in the lath house at Pemberton 4 Aug 1960 and also by P. E. Marucci 21 Oct 1960 (males and oviparae present) on cultivated blueberry.

L. W. Coles wrote me on Aug. 4 1960 that this aphid is parasitized by *Aphelinus* sp. which becomes quite common in the insectary but is probably scarce in the field.

Myzocallis ascepiadis (Monell) Clifton, 28 Jl 1961, a few plants of Asclepiadis syriaca fairly infested well (MDL & DDL coll). Masonville 2 Aug 1962 on A. syriaca (HWA coll).

Myzocallis bella (Walsh) Haddonfield, 1 Sept 1946 on Quercus sp. and very abundant on several large Q. rubra 4 Jl 1960 (MDL coll B & T det); no aphids could be found on these latter trees during 1961 and 1962.

\* Myzocallis coryli Goeze. Haddonfield, 4 Jl 1958, a few in all stages on the leaves of a small Corylus sp. (MDL coll).

\* Myzocallis granovskyi Boudreaux & Tissot. Haddonfield, 25 Sept 1934 on Quercus sp. (MDL coll—B & T det). This record is under bella in the Prelim. List.

\* Myzocallis longiunguis Boudreaux & Tissot. Ridgewood, 11 Sept 1946 on Quercus sp. (MDL coll—B & T det); this record may be under bella in the Prelim. List. Haddon-field, 4 Jl 1960 on Q. rubra (MDL coll—B & T det).

\* Myzocallis melanocera Boudreaux & Tissot. Ramsey, 11 May 1941 on Quercus prinus (W. Gerstsch et al coll—B & T det); this is presumably the record under bella in the Preliminary List altho there the plant is Q. alba.

\* Myzocallis multisetis Boudreaux & Tissot. Riverton 23 Sept 1920, on alate on Cocos weddeliana as a "drift" (W B Wood coll—B & T det). Ridgewood, 29 May 1938 on Q. velutina (MDL coll—B & T det). This is under either bella or walshii in the Preliminary List.

Haddonfield, 29 May 1959, an alate on a yellow cloth and 4 Jl 1960 on red oaks (MDL coll—B & T det); none could be found on these same trees in 1961 or 1962.

Myzocallis punctata (Monell). New Brunswick, 5 Ju 1962, 3 alate "drifts" on sassafras (R C Reardon coll). Ridgewood, (at the Duck Pond), 27 Oct 1962, a single alate drift on Betula populifolia (MDL & Geo Saile coll). Second and third records for N. J.

Myocallis tiliae (Linnaeus) Linden Aphid. Ridgewood, 26 Jl 1961 a moderate infestation on the large lindens at the Railroad Station (MDL & DDL coll).

Myzocallis ulmifolii (Monell) Elm Leaf Aphid. Morristown, 26 Jl 1938 on elm leaves (C W Collins coll-1 slide in USNM).

Myzocallis walshii (Monell). Ridgewood, 4 Jl and 23 Aug 1936 on Quercus sp. (MDL coll—B & T det). Haddonfield, 25 Sept 1934 (MDL coll—record in Preliminary List confirmed by B & T) and 4 Jl 1960, very abundant on several large red oaks (MDL coll—B & T det); none could be found on these latter trees in 1961 or 1962.

Myzus cerasi (Fabricius) Black Cherry Aphid. Moorestown, 28 May, 1962 on cult. sour cherry (HWA coll). Somerville, 22 Ju 1962, abundant in curled leaves of flowering cherry (F F Stinson Coll—JOP det). Chester, 22 Ju 1962, abundant on leaves of Schmidt cherry (R. Sauer coll—JOP det).

Myzus ligustri (Kaltenbach) Privet Aphid. The following note is signed by Harry B. Weiss, New Jersey.

"As a rule California privet, Ligustrum ovalifolium, enjoys unusual freedom from insect attack. On July 15, 1915 a privet hedge in Jersey City was found to be infested by plant lice. The upper surfaces of the leaves were characteristically discolored, some being quite yellow and the foliage of the infested plants had a peculiar limp appearance instead of being twisted and curled. Specimens were sent to Prof. C. P. Gillette and determined by Mr. L. G. Bragg as *Rhopalosiphum ligustri* Kalt. They also stated they believed this to be the first record of the occurrence of this species in the United States." (Aphids on California Privet in New Jersey. Can. Ent. 48 (6): 215, 1961).

In his "Revision of North American Aphids of the Genus *Myzus*" (Miscl. Pub. 371, USDA, p. 12, 1940) Mason gives the distribution of this aphid as United States, Canada and Europe." The only slides I find in the USNM are: Conn—Milford 8 Ju 1925 on "hedge" (no collector given); RI—Newport, 10 Ju 1927 on privet (E B Larrimer coll); Canada—Victoria, B.C., 10 Jl 1934, no plant given (Record from Wm Middleton)—1 slide for each locality. Mason further states: "This species is reported as occasionally causing severe injury to privet hedges, tightly curling the leaves longitudinally. From what is known of the biology, a summer migration is indicated to an unknown secondary host."

Myzus lythri (Schrank) Mahaleb Cherry Aphid. Columbus, 12 Nov 1961, one winged male resting on laundry on line (LWC coll—JOP det). First record since 1916 in N. J. Myzus persicae (Sulzer) Green Peach Aphid. Kinkora, 21 Nov 1899 (1 Pergande

slide in USNM).

"General and threatening to potatoes." (Ins. and Dis. Newsletter for N. J. CEIR 9(28): 265, 10 Jl 1957).

"Becomes very numerous on many crops including potatoes, tomatoes, spinach, and lettuce late in the season." (Summary of Insect Conditions—1958 in New Jersey CEIR 9(7): 80, 1959).

Columbus, 5 and 11 Aug on eggplant and 11 Aug 1959 on pepper and okra (LWC coll).

Columbus, Dec 1960—Leon W. Coles sent me a number of specimens of this aphid which he stated had been persisting for some time on the flowers of two of his potted African violet plants growing indoors. All stages of the aphid were present although only one alate was in the lot. This appears to be the second record only for an aphid on

this plant in the United States, the first being also Myzus persicae, collected by Paul Lippold at Middleport, N. Y. 14 May 1958.

Gibbstown, 9 and 11 Aug on eggplant (DWJ coll). Mt. Holly, 2 1959 on Brassica juncea var. crispifolia (LWC coll). Burlington, 2 Nov 1959 on horseradish (DWJ & LWC coll). "Infesting potatoes and peppers in southern sections of N. J." (CEIR 10: 737, 1960). New Brunswich, 6 May on Cerastium vulgatum, 20 May on alfalfa, 6 May and 7 Jl on Polygonum convolvulus, 7 May on tulip, Clarksville, 2 Ju on potato, Sharptown, 3 Ju on tomato, New Market, 20 Ju on Raphanus raphanistrum, 22 Ju on red cabbage, 5 Oct on Ricinus communus, 16 Nov on kale—all HEW coll in 1960—det CFS. Closter, 12 Oct 1960, 1 alate, 2 apterae, 1 alatoid nymph on sweet clover (HEW coll—JOP det). New Brunswick, 7 May 1960 on Tulipa sp. (HEW coll—CFS det).

"There were a few isolated infestations of green peach aphids on potatoes." (Summary of Insect Conditions in New Jersey 1961 CEIR 12(11): 205, Mar 16 1962).

Moorestown, 10 Ju alates and a few apterae and 18 Apr 1961 on cotton in USDA greenhouse; (B Puttler coll); 25 May 1962, a few on cult. Snapdragon (MDL & EAR coll); 4 Jan 1962 and 18 Apr abundant on Chinese cabbage in USDA greenhouse (MDL & LWC coll). Bridgeton, Jl 1962, a few apterae on false aralia, *Dizygotheca veitchii*, in greenhouse (B K Buck coll). Medford, 9 Jl 1962, a number of alates on tomato (Marie C. Quinden coll).

\* Myzus polaris Hille Ris Lambers Weston, 5 Apr 1946 on carnation (F S Smith coll -1 slide in USNM).

Myzus scammelli Mason. I asked Mr. Philip E. Marucci, Research Specialist, Cranberry and Blueberry Research Laboratory, N. J. Agr. Exp. Sta., Pemberton, for a statement as to the status of this aphid on cranberries. In Dec 1962 he replied as follows:

"I believe now this aphid to be much more common that I previously imagined. If you get down on your hands and knees very early in the spring and look at the soft succulent runner growth on the underside of the stems, you will find them to be quite common on almost every cranberry bog. They indeed must be quite numerous as in certain short periods large numbers of Coccinellids and Syrphids can be netted on cranberries. After about the first of July, however, they are found with difficulty. This indicates, as I had previously indicated in my correspondence with you, that this species is quite well reduced by biological agents in the field. Incidentally I collected large numbers of these aphids and transferred them to diseased blueberry bushes, hoping to get virus transmission out of this procedure. The aphids did not take readily to this treatment and wandered all over the plants looking for something better to eat. Only a few planked down for a few days but these, only after three or four days, ambled away. This species I believe, therefore, to be quite specific in its feeding habits. Its chance finding by Mr. Scammel on three-square must surely have been random."

\* Nasonovia ribisnigri (Mosley). New Brunswick, 28 Ju (JOP det) and Cranbury, 2 Ju 1960 on *Hieracium floribundum* (HEW coll—CFS det). Beemerville, 11 Jl 1960 on *Cichorium intybus* (HEW coll—JOP det with a query).

Neosymydobius annulatus (Koch). Wycoff, 14 Oct 1960, 2 oviparae on Betula alba (MDL & DDL coll—JOP det). Ridgewood (Valeau Cemetary), 21 Oct, many sexuales (MDL & DDL coll) and 27 Oct 1962 at the Duck Pond, sexuales (MDL & Geo Saile Coll) on Betula populifolia.

\* Ovatus crategarius (Walker) Mint Aphid. Formerly widely known as Phorodon menthae (Buckton). Highland Park, 5 Ju and Mountainville, 4 Nov 1960 on Mentha spicata (HEW coll). Medford, 7 Oct, a few apterae and 20 Oct 1962 several apterae on M. spicata (Marie C. Quinden coll). Medford Lakes, 25 Sept 1962, 1 aptera on M. spicata (G G Rohwer coll).

\* Pemphigus brevicornis Hart. Chester, 28 Jl 1908 on Polygonum sp. (1 Pergande slide in USNM). Pemberton 23 Feb 1915 on roots of moss (H B Scammel coll—3 slides in USNM).

*Pemphigus populicaulis* Fitch Popular Leaf-petiole Gall Aphid. Camden, 12 Ju 1916, a gall on cottonwood (3 slides in USNM).

*Pemphigus populitransversus* Riley Poplar Leaf-stem Gall Aphid. An alate sexupara in Moericke trap, Haddonfield. Date unrecorded but probably in 1959 (Gladys Testerman coll—JOP det with query).

?\* Pentatrichopus fragaefolii (Cockerell) Strawberry Aphid. Deans, 5 Jl 1960, several apterae and 1 alatoid nymph on Fragaria sp. (HEW coll—JOP det with query).

\* Periphyllus californiensis (Shinji). Haddonfield, late Apr 1959, 12 alates (2 det with query) on a yellow cloth (Gladys Testerman coll—JOP det).

Periphyllus lyropictus (Kessler) Norway Maple Aphid. Fort Lee, 2 Jl 1909 (as Chaitophorus aceris) on sugar maple (Gillette in Jour. Econ. Ent. 2(6): 387, 1910). Haddonfield, 30 May 1959 on Acer platanoides, fairly common (MDL). Highland Park, 5 Ju 1960 on A. platanoides (HEW coll—CFS det). Ridgewood 14 Oct 1960, abundant, including sexuales, on a large sugar maple (MDL coll). Highland Park, 18 Oct 1962 on A. platanoides (HEW coll).

It should be noted that the maples in Haddonfield referred to in the Preliminary List as infested by this aphid are Norway Maples.

Periphyllus negundinis Thomas Boxelder Aphid. Lindenwold, May 1961, many alates and apterae on boxelder (LWC coll—JOP det).

*Phyllaphis fagi* (Linnaeus). Montclair, 27 May 1954 on purple beech (Bartlett Tree Research Labs.) Haddonfield, a large purple beech at 213 Rhoads Ave. has been under observation for several seasons. On 4 Jl 1958 this tree was very heavily infested altho alates were scarce; in Sept 1959 scarce; present but not numerous during 1960 and 1961 and very scarce in 1962. (MDL).

Prociphilus imbricator (Fitch) Beech Blight Aphid. Peapack, 12 Sept 1962 (F Braun coll) and Wanaque, 31 Aug 1962 (John Kegg coll) on Fagus americana. In regard to the Wanaque infestation Wm. M. Boyd, Chief Entomologist, N. J. Dept. Agr. wrote me on Nov. 20 as follows:

"I was at Wanaque and noted that the aphids were on scattered trees ranging from small saplings to trees 12 inches or more in diameter. The infested trees were in a moist glen and no aphids were found on trees at the top of the slopes. I also noticed that all infestations were on small branches and these less than 25 feet from the ground. Infested trees could be easily located by the coating of the bluish secretions on the ground. Braun noticed the same conditions at Peapack."

Prociphilus tessellatus (Fitch) Woolly Alder Aphid. Clinton, (Prof. W. D. Collins coll— C. V. Riley in Bull. U. S. Geol. Geog. and Surv. of the Territories 5(1):16, 1879, as *P. acerifolii* n. sp.). Lakewood, 8 Sept 1948 on *Alnus* sp. (D P Calsetta coll).

Pterocomma smithiae (Monell) Willow Grove Aphid or Black Willow Aphid. Bridgeport, Gloucester Co., 7 Jl 1962, abundant on stems of Salix nigra (S A Rohwer II & L D DeBlois coll—JOP det). Pennington, 26 Jl 1962, heavy on branches on Salix babylonica (F S Stinson coll—JOP det).

Rhopalosiphum conii (Davidson) Honeysuckle and Parsnip Aphid. New Brunswick, 10 May 1960 on ornamental Lonicera sp. (HEW coll—CFS det). Haddonfield, Sept 1961, an alate in Moericke trap (Gladys Testerman coll—JOP det with query). Mt. Holly, 2 Aug 1962 on Pastinaca sativa (an escape) (HWA coll). Beemerville, 7 Oct 1960, a stray alate on Pyrus sp. (HEW coll—JOP det).

?\* Rhopalosiphum enigmae Hottes & Frison Haddonfield, Sept 1961, 1 alate in Moe-

ricke Trap (Gladys Testerman coll-JOP det with query).

Rhopalosiphum fitchii (Sanderson) Apple Grain Aphid. Columbus, 12 Nov, 1962, two alate males resting on laundry on line (LWC coll—JOP det). (Hyadaphis, foeniculi Pass.)

Rhopalosiphum maidis (Fitch) Corn Leaf Aphid; Haddonfield, Sept 1961, 5 alates in a Moericke trap (Gladys Testerman coll—JOP det). New Market 19 Jl 1960 on corn (HEW coll).

"The corn leaf aphid was found in large numbers on corn throughout the state but in some southern areas of the State it was present in economic numbers on field corn." (Insect Conditions in New Jersey in 1957 in CEIR 8(1): 6, 1958.

"Heavy on field and sweet corn in several areas." (N. J. Ins. Dis. Newsltr., Aug 21 in CEIR 12(35): 967, Aug 31, 1962).

Rhopalosiphum nymphaeae (Fabricius) Waterlily Aphid. Burlington, Co., 3 Sept to 14 Oct 1947, no plant given (P. E. Marucci coll—1 slide in USNM). Ridgewood, 18 Sept 1959, scarce on Nymphaea sp. (MDL & DDL coll). Haddonfield, 19 Aug 1961, a few on several water hyacinths and abundant on water lilies in the same small fish pools; on 26 Oct 1961 very few left on the waterlilies and none on the water hyacinths (MDL coll).

Rhopalosiphum rhois (Monell) Monell's Sumac Aphid. Burlington Co., 30 Sept to 14 Oct 1947 in blueberry fields (P E Marucci coll—1 slide in USNM). Haddonfield, Sept 1961, one alate in a Moericke trap (Gladys Testerman coll—JOP det as "Close to this species"). Moorestown, 1 Aug 1962 on Rhus typhina (HWA coll). Columbus, 12 Nov 1962, an alate resting on laundry on line (LWC coll—JOP det). Beemerville, 20 Ju 1960 on Capsalla bursa-pastoris (HEW coll—JOP det).

\* *Rhopalosiphum rufomaculatum* (Wilson) False or Pale Chrysanthemum Aphid. Fort Lee, 10 Nov 1908, Riverton, 19 Mar 1921 and Madison, 27 Mar 1924 on chrysanthemum (1 slide each by Pergande in USNM).

\* Rhopalosiphum serotinae Oestlund. Moorestown, 25 May, several apterae and 4 Jl 1961, apterae and alates on Solidago rugosa (HWA coll).

\* Saltusaphis elongatus Baker. Whitesbog, 21 Oct 1914, oviparous females only on Carex sp. Types in USNM Cat. No. 20720 (A. C. Baker Can. Ent. 44(1): 4, 1917).

Schizaphis granarium (Rondani) Greenbug. Formerly in Toxoptera. Cranbury, 2 Ju 1960 on timothy grass (HEW coll—CFS det).

\* Schizolachnus sp. Moorestown, 30 Oct 1961, a male in flight (EAR coll—Hottes det). \* Schizolachnus lanosus Hottes. Moorestown, Nov 1961 on Pinus virginiana (EAR coll—Hottes det with query and adds "but oviparous female is unknown").

\* Sipha agropyrella Hille Ris Lambers. Sussex, 5, 15, Nov 1961, swept from alfalfa. (P Mina coll—LMR det). Morris County 29, 30 Nov, 4 Dec 1961, swept from alfalfa (P Mina coll—LMR det). Warren Co., 22, 27 Nov 1961, swept from alfalfa (P Mina coll—LMR det).

\* Sipha flava (Forbes) Yellow Sugarcane Aphid. Camden, 3 Nov 1961, swept from alfalfa (P Mina coll-det LMR).

? Stegophylla quercifoliae (Gillette). Swartswood, 11 Jl 1960 on Quercus rubra var borealis, several apterae (HEW coll—JOP det who indicates this may be quercicola (Monell).

Therioaphis trifolii (Monell), Yellow Clover Aphid. Gloucester Co., 30 Aug 1943 on red clover (M J Ramsey coll—det Mason, as *Myzocallis ononidis* (Kalt.), Special Port Survey, from a note in USDA's Insect Pest Survey Files. Salem and Somerset Counties, Nov 1956 in alfalfa fields (I G Merrill coll). Deans, 5 Jl 1960 on *Medicago lupulina* (HEW coll—JOP det). New Brunswick, 15 Jl 1960, immatures on *Trifolium repens* (HEW coll—JOP det). Moorestown, 22 Sept and 20 Oct 1955 on red clover (DWJ coll

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-slides in USNM). Bridgeton, 24 Ju 1958 on alfalfa (Filmer coll-1 slide in USNM). Middlebush, 8 Ju 1960 on *Trifolium* sp. (HEW coll-CFS det).

\* Thripsaphis balli (Gillette) Whitesbog, 13 Nov 1915, oviparous females taken on three-square by H B Scammell (A C Baker Can. Ent. 49(1): 4, 1917).

## FOOD PLANT LIST\*

* Plants marked with an asterisk are in	Macrosiphum euphorbiae
addition to those in the Preliminary List	Myzus persicae
Acor magundo (Povoldor)	* Artemisia vulgaris (Mugwort)
Acer negundo (Boxelder) Periphyllus negundinis	Aphis armoraciae
Acer platanoides (Norway Maple)	Capitophorus glandulosus
	? Geoica lucifuga
Drepanosiphum platanoides	Asclepius syriaca (Common Milkweed)
Periphyllus lyropictus	Acyrthosiphon solani
* Acer rubrum (Red Maple)	Aphis asclepiadis
Drepanaphis acerifolii	Macrosiphum euphorbiae
Periphyllus lyropictus	Myzocallis asclepiadis
Acer saccharum (Sugar or Hard Maple)	Aster sp.
Drepanaphis acerifolii	Anuraphis maidiradicis
Periphyllus lyropictus	Dactynotus paucosensoriatus
Acer saccharinum (Silver or Soft Maple)	* Aster novaeangliae (Hardy Purple
Drepanaphis acerifollii	Aster)
Drepanaphis parvus	Dactynotus anomalae
Periphyllus lyropictus	* Aster simplex var. ramosissimus
African Violet—see Saintpaulia	Aphis armoraciae
Alder—see Alnus	Aphils armoraciae
Alfalfa—see Medicago sativa	Beech, American—see Fagus grandifolia
Alnus sp. (Alder)	Beech, Copper or Purple-see Fagus syl-
Prociphilus tesselatus	vatica var. purpurea
* Ambrosia sp. (Ragweed)	Betula sp. (Birch)
Dactynotus ambrosiae	Camamelistes spinosus
* Ambrosia artemisiifolia	Betula alba (European white Birch)
Dactynotus tuataiae	Euceraphis punctipennis
* Amelanchier canadensis (Shadbush)	* Betulae papyrifera (Canoe or Paper
Aphis spiraecola	Birch)
* Anaphalis margaritacea (Pearly Ever-	Calaphis betulaecolens
lasting)	? Euceraphis deducta
Aphis sp.	* Betula populifolia (Gray Birch)
* Andromeda sp.	Calaphis betulaecolens
Aphis sp.	Calaphis betulella
* Antirrhinum sp. (Snapdragon)	Euceraphis punctipennis
Myzus persicae	Hamamelistes spinosus
* Apocynum cannabinum (Indian Hemp)	Neosymdobius annulatus
Aphis asclepiadis	Bindweed—see Polygonum convolvulus
Macrosiphum euphorbiae	Birch—see Betula
Apple-see Malus pumila	Bittersweet, Climbing—see Celastrus
Aquilegia sp. (Columbine)	scandens
Macrosiphum euphorbiae	Blackberry—see Rubus
* Arctium minus (Common Burdock)	Blackeyed Susan—see Rudbeckia hirta
Acyrthosiphon solani	Blackgum—see Nyssa
* Armoracia lapathifolia (Horseradish)	Black Medic-See Medicago lupulina
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Black Walnut-see Juglans nigra Blueberry-see Vaccinium corymbosum Boxelder-see Acer negundo Brassica chinensis (Pakchoi or Chinese Cabbage) Myzus persicae \* Brassica juncea var. crispifolia (Curled Mustard) Myzus persicae \* Brassica oleracea var. acephala (Kale) Myzus persicae \* Brassica oleracea var. botrytis (Cauliflower) Brevicoryne brassicae Brassica oleracea var. capitata (Cabbage) Brevicoryne brassicae Broccoli-see Brassica oleracea var. botrytis Burdock-see Arctium Burningbush-Euonymus atropurpureus Cabbage-see Brassica oleracea var. capitata Campion-see Lychnis \* Campsis radicans (Trumpetcreeper) Macrosiphum euphorbiae \* Capsella bursa-pastoris (Shepard's Purse) Acyrthosiphon solani \* Capsicum frutescens (Redpepper) Macrosiphum euphorbiae Myzus persicae \* Carex sp. (Sedge) Saltusaphis elongatus Carnation-see Dianthus caryophylla Carrot, Wild-see Daucus carota Castanea dentata (Chestnut) Calaphis castaneae Castorbean-see Ricinus \* Catalpa sp. Aphis gossypii \* Catalpa speciosa Aphis gossypii Cauliflower-see Brassica oleracea var. botrytis Celandine-see Chelidonium (Climbing \* Celastrus scandens Bittersweet) Acyrthosiphon solani Aphis spiraecola \* Cerastium vulgatum Acyrthosiphon solani

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Myzus persicae \* Chaenomeles japonica (Japanese Flowering Quince) Aphis pomi \* Chelidonoum majus (Greater Celandine) Acyrthosiphon solani \* Chenopodium album (Lambsquarters) Aphis fabae Macrosiphum euphorbiae Cherry, Sour-see Prunus cerasus Chestnut-see Castanea Chicory-see Cichorium intybus Chickweed—see Stellaria Chinese Cabbage-see Brassica chinensis Chrysanthemum sp. Macroniphoniella sanborni Rhopalosiphum rufomaculatum \* Cichorium intybus Macrosiphum euphorbiae Acyrthosiphon solani \* Cirsium sp. (Thistle) Anuraphis cardui Aphis fabae Aphis helianthi Capitophorus elaeagni Macrosiphum sp. \* Cleome spinosa (Spiderflower) Myzus persicae Clover-see Trifolium Cocklebur-see Xanthium Columbine—see Aquilegia \* Convolvulus sp. (Bindweed) Acyrthosiphon solani Macrosiphum sp. \* Comptonia peregrina var. asplenifolia (Sweetfern) Cepegillettea myricae \* Coreopsis crassifolia Aphis coreopsidis Corn-see Zea mays \* Corylus sp. (Filbert) Myzocallis coryli \* Cotoneaster sp. Aphis pomi \* Cotoneaster salsifolia (Willowleaf Cotoneaster) Aphis pomi Cotton-see Gossypium Cottonwood—see Populus Cranberry-see Vaccinium macrocarpum Crataequs sp. (Hawthorn)

Amphorophora crataegi Aphis crataegifoliae ? Aphis pomi Aphis spiraecola Eriosoma crataegi Haw-\* Crataegus crusgalli (Cockspur thorne) Amphorophora crataegi Eriosoma crataegi \* Cryptotaenia canadensis (Honewort) Aphis gossypii Cucumis melo (Muskmelon) Aphis gossypii Cucurbita maxima (Squash) Macrosiphum euphorbiae Curled Mustard-see Brassica juncea var. crispifolia Cydonia Hybrid (Quince) Aphis pomi \* Cynara scolymus (Globe Artichoke) Capitophorus elaeagni Dactylis glomerata (Orchardgrass) Hyalopteroides humilis Dandelion-see Taraxacum \* Daucus carota (Wild Carrot) Cavariella essigi \* Dianthus caryophyllus (Carnation) Myzus polaris \* Dizygotheca veitchii (False Aralia) Myzus persicae Dock—see Rumex Eggplant-see Solanum melogena \* Eichornia crassipes (Water Hyacinth) Rhopalosiphum nymphaeae \* Elaeagnus umbellata Capitophorus elaeagni Elder-Sambucus Elm-see Ulmus English Ivy—see Hedera Erigeron sp. (Fleabane) Dactynotus gravicornis Dactynotus tissoti \* Erigeron strigosus (Daisy Fleabane) Dactynotus gravicornis \* Euonymus atropurpureus (Burningbush) Aphis fabae \* Euonymus europaeus (European Spindletree) Macrosiphum euphorbiae \* Eupatorium perfoliatum (Thoroughwort) Aphis spiraecola

Eupatorium purpureum (Joepyeweed) Aphis gossypii European Spindletree-see Eupatorium europaeus Evening Primrose—see Oenothera Everlasting-see Anaphalis Fagus sylvatica var. purpurea (Copper or Purple Beech) Phyllaphis fagi \* Fagus (americana) grandifolia (Amercan Beech) Prociphilus imbricator False Aralia-see Dizygotheca veitchii Filbert-see Corylus Firethorn-see Pyracantha Fleabane-see Erigeron Flower-of-an-hour-see Hibiscus trionum Fragaria sp. (strawberry) Aphis forbesi ? Pentatrichopus fragaefolii \* Galinsoga parviflora Aphis spiraecola Gerardia pedicularia Aphis fabae Globe Artichoke-see Cynara scolymus Gloriosa Daisy-see Rudbeckia Goldenglow-see Rudbeckia lacinata Goldenrod-see Solidago \* Gossypium sp. (Cotton) Aphis gosspyii Myzus persicae Grape-see Vitis Hamamelis virginiana (Witchazel) Hormaphis hamamelidis Hawkweed-see Hieracium Hawthorn-see Crataegus Heart's ease-see Polygonum Hedera helix (English Ivy) Aphis pseudohederae \* Helianthus sp. (Sunflower) Aphis debilicornis \* Hibiscus esculentus (Okra) Aphis gossipii Myzus persicae Hibiscus syriacus (Rose-of-Sharon) Aphis gossypii \* Hibiscus trionum (Flower-of-an-hour) Aphis gossypii \* Hieracium sp. (Hawkweed) Acyrthosiphon solani

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\* Hieracium floribundum (King Devil) Acyrthosiphon solani Nasonovia ribisnigri Highbush Cranberry-see Viburnum trilobum Honeysuckle-see Lonicera Honewort-see Cryptotaenia Horsemint-see Monarda Horseradish-see Armoracia Hydrangea sp. Aphis fabae \* Ilex verticillata Macrosiphum rosae \* Impatiens pallida (Pale Touch-me-not) Aphis impatientis Indian Hemp-see Apocynum \* Ipomoea batatas (Sweet potato) Macrosiphum euphorbiae Japanese Flowering Quince-see Chaenomeles Joepyweed-see Eupatorium purpureum \* Juglans nigra (Black Walnut) Monellia caryae Monellia caryaella Kale-see Brassica oleracea var. acephala King Devil-see Hieracium floribundum Knotweed-see Polygonum \* Lactuca sp. (Lettuce) Acyrthosiphon solani Dactynotus pseudambrosiae Myzus persicae Lactuca serriola (Prickly Lettuce) Dactynotus sp. Dactynotus pseudambrosiae \* Lactuca virosa Dactynotus pseudambrosiae Dactynotus sonchellus Lambsquarters—see Chenopodium album \* Lepidium virginicum (Poor-Man's Pepper) Hyadaphis pseudobrassicae \* Ligustrum ovalifolium (California Privet) Myzus ligustri Linden-see Tilia Liveforever-see Sedum Locust, Black-see Robinia Liriodendron tulipifera (Tuliptree) Macrosiphum liriondendri Lonicera sp. (Honeysuckle)

Rhopalosiphum conii \* Lychnis alba (Campion) Acyrthosiphon solani Aphis sp. Lycopersicon esculentum (Tomato) Macrosiphum euphorbiae Myzus persicae \* Lyonia (Pieris) mariana (Staggerbush) Aphis sp. \* Malus sp. (A Flowering Crab) Aphis pomi Mallow—see Malva Malva sylvestris (Mallow) Dactynotus sp. Malus pumila (Apple) Anuraphis rosea Aphis pomi Maple-see Acer \* Medicago lupulina (Black Medic) Therioaphis trifolii Medicago sativa (Alfalfa) Aphis craccivora Aphis gossypii Macrosiphum pisi Myzus persicae Sipha agropyrella Sipha flava Therioaphis trifolii \* Melilotus sp. (Sweetclover) Myzus persicae \* Mentha spicata (Spearmint) Ovatus crataegarius Milkweed—see Asclepias \* Monarda punctata (Horsemint) Aphis gossypii \* Moss Pemphigus brevicornis Mountain Ash-see Sorbus Mugwort-see Artemisia vulgaris Muskmelon-see Cucumis melo Nasturtium-see Tropaeolum Nymphaea sp. (Waterlily) Rhopalosiphum nymphaeae Nyssa sylvatica (Blackgum) Aphis coreopsidis Oak-see Quercus \* Oenothera sp. (an ornamental var.) Acyrthosiphon solani ? Oenothera biennis (Common Evening-

primrose)

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Aphis oestlundi Okra-see Hibiscus esculentis Orchardgrass-see Dactylis glomerata Pakchoi-see Brassica chinensis Pansy-see Viola tricolor Parsley-see Petroselinum Parsnip-see Pastinaca \* Pastinaca sativa (Cultivated Parsnip) Rhopalopishum conii Peach-see Prunus persicae \* Petroselinum crispum (Common Parsley) Myzus persicae Petunia sp. Aphis gossypii Macrosiphum euphorbiae \* Phleum pratense (Timothy) Schizaphis graminum Sipha flava \* Phytolacca americana (Pokeberry) Acyrthosiphon solani \* Picea sp. (Spruce) Cinara pilicornis \* Picea glauca (White Spruce) Cinara pilicornis Pine-see Pinus Pinkweed—see Polygonum pennsylvanicum *Pinus strobus* (White Pine) Cinara strobi \* Pinus sylvestris (Scotch Pine) Cinara pinea \* Pinus taeda (Loblolly Pine) ? Cinara longispinosa Cinara pinea Eulachnus rileyi \* Pinus virginiana (Scrub Pine) ? Schizolachnus lanosus Plane tree-see Platanus orientalis \* Plantago sp. (Plantain) Acyrthosiphon solani \* Plantago major (Common Plantain) Acyrthosiphon solani Plantain-see Plantago \* Platanus orientalis (Oriental Plantree) Longistigma caryae Pokeberry-see Phytolacca \* Polygonum persicaria (Heart's -ease) Capitophorus hippophoes \* Polygonum sp. (Knotweed or Smartweed) Capitophorus hippophoes Dactynotus sp. Pemphigus brevicornis

\* Polygonum convolvulus (Black Bindweed) Macrosiphum sp. Myzus persicae Polygonum pennsylvanicum (Pinkweed) Capitophorus hippophoes \* Polygonum persicaria (Heart's-ease) Capitophorus hippophoes Poor-Man's Pepper-see Lepidium Poplar-see Populus \* Populus sp. (Cottonwood) Pemphigus populicaulis Populus sp. (Poplar) Chaitophorus populicola \* Populus tremuloides (Quaking Aspen) Chaitiphorus populicola Potato-see Solanum tuberosum Privet, California-see Ligustrum \* Prunus sp. (Flowering Cherry) ? Acyrthosiphon solani Myzus cerasi \* Prunus cerasus (Sour Cherry) Myzus cerasi \* Prunus hortulana var. mineri (Miner Plum) Hyalopterus pruni Prunus persicae (Peach) Myzus persicae \* Pyracantha sp. (Firethorn) Aphis spiraecola Eriosoma crataegi \* Pyracantha coccinea var. lalandi (Laland Firethorn) Aphis spiraecola \* Pyracantha crenulata (Nepal Firethorn) Aphis spiraecola Quaking Aspen-see Populus tremuloides Quercus sp. (Oak) Myzocallis bella Myzocallis granovskyi Myzocallis longiunguis Myzocallis walshii \* Quercus illicifolia (Scrub Oak) Stegophylla quercicola Quercus palustris (Pin Oak) Longistigma caryae \* Quercus prinus (Swamp Chestnut Oak) Myzocallis melanocera \* Quercus rubra (Red Oak) Myzocallis longiunguis Myzocallis melanocera

\* Quercus rubra var. borealis (Northern Red Oak) Stegophylla quercicola ? Stegophylla quercifoliae Quercus velutina (Black Oak) Myzocallis multisetis Quince-see Cydonia Radish—see Raphanus \* Raphanus raphanistrum (Wild Radish) Macrosiphum euphorbiae \* Raphanus sativus (Garden Radish) Myzus persicae Red Clover-see Trifolium pratense Redpepper-see Capsicum \* Rheum rhaponticum (Garden Rhubarb) Aphis fabae Rhubarb-see Rheum \* Rhus typhina (Staghorn Sumac) Rhopalosiphum rhois \* Ricinus communis (Castorbean) Myzus persicae \* Robinia pseudacacia (Black Locust) Aphis craccivora Rosa sp. (Rose) Macrosiphum euphorbiae Macrosiphum rosae \* Rosa multifolora (Japanese Rose) Macrosiphum rosae \* Rosa palustris (Swamp Rose) Macrosiphum euphorbiae Rose-see Rosa Rose-of-Sharon-see Hibiscus syriacus Rose Mallow-see Hibiscus \* Rubus cuneifolium (Sand Blackberry) Aphis rubifolii \* Rudbeckia hybrid (Gloriosa Daisy) Dactynotus sp. Rudbeckia hirta (Blackeyed Susan) Dactynotus sp. Dactynotus n.sp. Dactynotus ambrosiae \* Rudbeckia laciniata (Goldenglow) Dactynotus rudbeckiae Rubus strigosus (Red Raspberry) Amphorophora rubi \* Rumex acetosella (Sheep-Sorrel) Anuraphis sp. \* Rumex crispus (Yellow Dock) Aphis rumicis Myzus persicae Rumex obtusifolia (Bitter Dock)

Aphis rumicis Rye-see Secale \* Saintpaulia ionantha (African Violet) Myzus persicae Salix sp. (Willow) Chaitophorus viminalis \* Salix babylonica (Weeping Willow) Lachnus salignus Pterocomma smithiae \* Salix discolor (Pussywillow) Lachnus salignus ? \* Salix nigra (Black Willow) Pterocomma smithiae \* Sambucus canadensis (Common Elder) Aphis sambucifoliae \* Scirpus americana (Three Square) Thripsaphis balli \* Secale cereale (Rye) Macrosiphum avenae Sedge-see Carex \* Sedum sp. (Liveforever) Aphis sedi Shadbush-see Amelanchier Shepard's Purse-see Capsella bursa-pastoris Sheep-Sorrel-see Rumex acetosella Silver or Soft Maple-see Acer saccharinum Smart Weed-see Polygonum Snapdragon-see Antirrhinum Solanum melogena (Eggplant) Macrosiphum euphorbiae Myzus persicae Solanum tuberosum (Potato) Macrosiphum euphorbiae Myzus persicae Solidago sp. (Goldenrod) Dactynotus nigrotuberculatus Dactynotus gravicornis Dactynotus tissoti Solidago fistulosa (Pinebarren Goldenrod) Dactynotus rudbeckiae \* Solidago rugosa (Rough Goldenrod) Rhopalosiphum serotinae \* Sonchus asper (Spiny-leaved Sowthistle) Amphorophora sonchi \* Sonchus oleraceus (Common Sowthistle) Dactynotus pseudambrosiae \* Sorbus sp. (Mountain Ash) Aphis pomi

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\* Sorbus aucuparia (European Mountain Ash) Aphis pomi Sowthistle-see Sonchus Spearmint—see Mentha spicata Spiderflower-see Cleome spinosa Spinach—see Spinacia \* Spinacia oleracea (Spinach) Myzus persicae Spiraea vanhouttei (Vanhoutte Spiraea) Aphis spiraecola Spruce—see Picea Squash—see Cucurbita maxima Staggerbush-see Lyonia \* Stellaria media (Common Chickweed) Acyrthosyphon solani ? Aphis gossypii Strawberry—see Fragaria Sumac—see Rhus Sunflower—see Helianthus Sweetclover-see Melilotus Sweetfern-see Comptonia Sweetpotato-see Ipomoea \* Taraxacum officinale (Dandelion) ?) Geoica lucifuga Thistle-see Cirsium Thoroughwort-see Eupatorium perfoliatum Three-Square—see Scirpus americana Tilia americana (American Linden) Myzocallis tiliae Timothy-see Phleum Tomato-see Lycopersicon Touch-me-not-see Impatiens \* Trifolium sp. (Clover) Therioaphis trifolii Trifolium pratense (Red Clover) Anuraphis bakeri Aphis craccivora Macrosiphum pisi Therioaphis trifolii \* Trifolium repens (White Clover) Therioaphis trifolii \* Triticum spp. (Wheat) Macrosiphum avenae Tropaeolum sp. (Nasturtium) Aphis fabae

Tulipa sp. (Tulip) Myzus persicae Tuliptree-see Liriodendron Ulmus sp. (Elm) Eriosoma lauigerum Myzocallis ulmifolii Pemphigus ulmifusus Vaccinium corymbosum (cult. Highbush Blueberry) ? Aphis gossypii Masonaphis (Ericobium) azaleae Vaccinium macrocarpum (Cranberry) Myzus scammelli \* Verbena sp. Anuraphis maidiradicis Viburnum sp. Anuraphis viburnicola Viburnum opulus (European Cranberrybush) Anuraphis viburnicola Viburnum trilobum (Highbush Cranberry) Aphis fabae Viola sp. (Violet) Myzus persicae \* Viola tricolor var. hortensis (Garden Pansy) Acyrthosiphon solanum Violet-see Viola Vitis sp. (Grape) Aphis illinoisensis Water Hyacinth-see Eichornia crassipes Waterlily-see Nymphaea \* Weigela sp. ? Aphis sp.

Trumpetcreeper-see Campsis radicans

? Aphis gossypii
Wheat—see Triticum
Willow—see Salix
Witchhazel—see Hamamelis
\* Xanthium sp. (Cocklebur) Dactynotus rudbeckiae
Zea mays (Corn) A puraphis meidinedicia

Anuraphis maidiradicis Rhopalosiphum maidis